

REMARKS

Claims 11-23 are pending in this application. Claims 1-10 have been canceled. Claims 11-23 have been added. No new matter has been added by way of these new claims because each new claim is supported by the present specification and the canceled claims.

For example, new claims 11, 12 and 17 are supported by canceled claims 1-5 and by the specification at page 9, lines 3-12. New claims 13 and 19 are supported by originally filed claim 6 and by the specification at page 7, lines 5-7. New claims 14 and 20 are supported by canceled claim 7 and at page 8, lines 17-19 of the specification. New claims 15 and 21 are supported by canceled claim 8 and page 8, lines 19-21 of the specification. New claims 16 and 22 are supported by canceled claim 9 and the paragraph bridging pages 7-8 of the specification. New claim 23 is supported by originally filed claim 10 and by the specification at page 12, lines 9-14. Thus, no new matter has been added.

Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims.

Drawings

The Examiner has objected to the drawings because the graphs are too dark and are difficult to read. Corrected formal drawings are enclosed herewith for the Examiner's review. Applicant respectfully requests the Examiner to withdraw this objection.

Specification

The disclosure is objected to because of an informality at page 1 of the specification. This informality has been corrected, and Applicant respectfully requests the Examiner to withdraw this objection.

Issues Under 35 U.S.C. § 112, Second Paragraph

Claims 2, 5, and 10 stand rejected under 35 U.S.C. § 112, second paragraph, for reasons of indefiniteness. Applicant respectfully traverses.

First, Applicant submits that the disputed claims have been canceled, rendering this rejection moot.

Second, with regard to the newly added claims, these claims do not recite "and/or". Further, claim 23 properly recites a method for producing sterilized poultry meat. Thus, Applicant respectfully submits that the presently pending claims recite clear and definite claim language. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

Issues Under 35 U.S.C. § 103(a)

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kurschner *et al.* (U.S. Patent No. 5,632,676; hereinafter Kurschner '676) in view Nishimoto *et al.* (U.S. Patent No. 6,165,964; hereinafter Nishimoto '964). Applicant respectfully traverses.

The Present Invention and Its Advantages

Control of microorganisms during poultry processing is generally difficult. During the processing of poultry, the meat can be contaminated with microorganisms during transportation or at any other stage of the processing. Such undesirable microorganisms include *Salmonella spp.*, *Staphylococcus aureus*, and *E. coli* O157:H7, whereby these microorganisms can originate from the air, water, ice, or the apparatus itself that processes the meat.

There exists various methods for controlling the level of microorganisms in poultry. Some sterilization methods for poultry involve adjusting the temperature and pH of water (as Applicant states in the specification at page 2, lines 1-4). However, conventional methods such as adjusting the temperature of water are not completely effective. Other conventional methods have been proposed, but such methods still lead to drawbacks, such as harmful chlorine gas,

incomplete sterilization, and environmental pollution (at page 2 of the specification).

In contrast, the present invention provides safer, simpler and effective methods of sterilizing poultry meat. Specifically, the present invention is directed to a method of sterilizing poultry meat comprising the step of subjecting poultry meat to a contact treatment with an aqueous hinokitiol solution in poultry processing for a production of poultry meat. The contact treatment is carried out in one or more steps, where these steps are selected from the group consisting of an evisceration step, a chilling step and a wrapping step.

Other embodiments of the present invention include a different pH or concentration of the hinokitiol, adjusting the temperature of the contact treatment, and carrying out the contact treatment by applying a coat, spraying, rubbing or immersing the poultry meat into the aqueous solution.

Even the advantages of the present invention have been experimentally confirmed. As can be seen from Table 1 and Figures 3-7, the present invention unexpectedly provides safer and more effective sterilization methods for poultry meat (see page 16, lines 1-6) over conventional sterilization methods.

In contrast to the present invention, the cited combination of Kurschner '676 and Nishimoto '964 fails to disclose all features and advantages of the present invention.

Distinctions over the Cited Combination of Kurschner '676 and Nishimoto '964

Three requirements need to be satisfied in order to establish a *prima facie* case of obviousness:

- (1) the cited references must disclose or teach all features as claimed;
- (2) the cited references themselves must state the motivation or suggestion to combine the references; and
- (3) one having ordinary skill in the art must reasonably expect to be successful in achieving the present invention upon reading the references.

See *In re Vaeck*, 947 F.2d, 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); see also *In re Kotzab*, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000); *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988).

Here, not all requirements have been satisfied with respect to the cited combination of Kurschner '676 and Nishimoto '964. This is because neither of the cited references provide the requisite motivation and reasonable expectation of success that one having ordinary skill in the art would need in order to achieve the present invention (the second and third requirements for a *prima facie* case of obviousness).

The Kurschner '676 reference discloses a method for sanitizing fowl that has been killed, plucked and eviscerated, using peracetic acid solution (see Abstract; claim 1). The Nishimoto '964 reference is

directed to using an aqueous antibacterial solution of hinokitiol for kitchen goods and for filters for an air conditioner, air cleaner and electric cleaner (see Col. 9, lines 1-4). The Office Action also refers Applicant to the Abstract and Col. 9, lines 4-6 of Nishimoto '964.

However, Applicant respectfully submits that the neither Kurschner '676 nor Nishimoto '964 disclose that a hinokitiol solution can be used in place of peracetic acid solution for sterilizing poultry meat at any given point of the poultry processing for production of poultry meat. In other words, the cited references have been improperly combined.

This is because upon a closer reading of Nishimoto '964, one skilled in the art would not combine this reference with Kurschner '676. Any cited reference used for a rejection under 35 U.S.C. § 103(a) must be considered in its entirety, i.e., as a whole. See *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). In other words, the cited Nishimoto '964 reference must be read in its entirety. The Office Action refers to Col. 9, lines 4-6. However, when read in its entirety, Nishimoto '964 does not give the requisite motivation and reasonable expectation of success to one skilled in the art in order to produce the present invention.

This is because the disclosure of "food factories" is not proper grounds for motivation and/or reasonable expectation of success, and Applicant respectfully traverses the conclusion in the Office Action

that the two references are "art-recognized equivalents" (page 3 of the Office Action).

First, Applicant respectfully refers the USPTO to the scope of the present invention. The present invention is directed to a method of sterilizing poultry meat comprising the step of subjecting poultry meat to a contact treatment with an aqueous hinokitiol solution in poultry processing for a production of poultry meat. The contact treatment is carried out in one or more steps, where these steps are selected from the group consisting of an evisceration step, a chilling step and a wrapping step.

Second, Applicant submits that the proper perspective in combining any cited references is one having ordinary skill in the pertinent art. Here, the Examiner is asserting that one having ordinary skill in the art of poultry processing would be motivated to combine the Kurschner '676 and Nishimoto '964 references because Nishimoto '964 states its antimicrobial agent could be used in "food factories". Specifically, Nishimoto '964 describes using the agent as follows:

... for kitchen goods such as a kitchen towel, a cutting board, and knives; filters for an air conditioner, air cleaner and electric cleaner; and medical devices such as an inhalator, and a humidifier. Therefore, the antimicrobial agent or microbicide of the present invention is widely used in hospitals or food factories.

(Applicant's emphasis added; at Col. 9, lines 1-6). However, it is clear that when this whole disclosure of Nishimoto '964 is read, one having ordinary skill in the art, or even the average reader, would see that

the described microbicide is used for cleaning non-food items in a food factory or in hospitals. Such inanimate items include air conditioner filters and medical devices such as an inhalator. The disclosure of "food factories" is not food. Nothing in this disclosure suggests using the microbicide on food itself (in a hospital or food factory), or even during processing of poultry meat (such as immersing chicken in the solution).

This disclosure of using microbicides on inanimate objects, and not for processing poultry, is also supported by the Examples in Nishimoto '964. For example, Table 8 shows the sterilization of socks, tank tops and underwear (at Cols. 16-17). Thus, when read in its entirety, Nishimoto '964 does not give the requisite motivation and reasonable expectation of success to one skilled in the art in order to produce the present invention.

Applicant further submits that to say the cited Nishimoto '964 reference is in an art analogous to the present invention is to broadly and improperly label the art of poultry processing. One having ordinary skill in the art would not label the art of poultry processing into fields containing problems of sterilizing inanimate objects such as kitchen towels, air filters, and electric cleaning filters. Put differently, any art or problem could be labeled broadly enough so as to encompass many other fields or art which would not be relevant to one skilled in a particular art. Thus, it is not a matter of replacing a

sterilizing agent with something else (as stated in the Office Action at page 3). Here, Nishimoto '964 has been improperly labeled so broadly as an analogous art due to the disclosure of "food factories".

In addition, in the art of food processing, not all kinds of sterilizing agents can be used for sterilizing foods because a great deal of care must be taken because of the potential harm to the consumer. In the sterilization methods for food, the food must be considered safe and effectively sterilized for consumption. Thus, one sterilizing agent cannot be readily substituted for another. This would be an additional reason why the cited references could not be properly combined.

Thus, Applicant respectfully submits that Nishimoto '964 is not analogous art. Further, the Nishimoto '964 reference only discloses sterilizing inanimate objects, and not for immersing any poultry meat during processing in the solution as instantly claimed. Therefore, one skilled in the art would not be motivated or reasonably expect to be successful, upon reading the cited Nishimoto '964 reference, in combining this reference with Kurschner '676 and achieving the present invention. Accordingly, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

Only Improper Hindsight Reconstruction Achieves the Present Invention

Thus, the only way to achieve the present invention is to read the present specification, review what is being claimed, and using substantial hindsight reconstruction by combining reference A with reference B.

However, this reconstruction is contrary to case law when the USPTO has simply chosen elements from cited references after considering the instant disclosure to order to come up with the methods as presently claimed (i.e., claim 11). The USPTO has, therefore, relied on an impermissible level of "hindsight reconstruction" as a basis of support of the instant rejection. As stated by the Federal Circuit in *Sensonics Inc. v. Aerersonic Corp.* 38 USPQ2d 1551 (Fed. Cir 1996):

To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction -- an illogical and inappropriate process by which to determine patentability. *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). The invention must be viewed not after the blueprint has been drawn by the inventor, but as it would have been perceived in the state of the art that existed at the time the invention was made. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

Existence of Unexpected Results Rebut Any Asserted Prima Facie Case of Obviousness

Applicant further submits that unexpected results exist for the present invention, whereby these unexpected results rebut the asserted

prima facie case of obviousness based on the cited combination of Kurschner '676 and Nishimoto '964.

First, Applicant refers the Examiner to parts of Kurschner '676 to demonstrate the less effective and more adverse method of this reference. The Kurschner '676 reference discloses that when peracetic acid solution is used, adverse effects such as bloating, discoloration, and a change in texture can occur (at Col. 2, lines 48-51). Thus, the concentration of peracetic acid-treated fowl may be limited (Col. 2, lines 44-47), and the step of washing the peracetic acid-treated fowl may be necessary (Col. 4, lines 2-4). Also, Kurschner '676 discloses that a peracetic acid is usually applied to the bird at the chilling bath stage of poultry processing due to the property of peracetic acid (Col. 3, lines 54-62).

However, when comparing to Kurschner '676, the present invention has unexpectedly produced safer, simpler, and more effective methods of sterilizing poultry meat. This is because hinokitiol does not show the adverse effects of peracetic acid as disclosed in Kurschner '676. As mentioned, experimental data in the specification has confirmed the unexpected advantages of the present invention (see page 16, lines 1-6) when compared to conventional sterilization methods (like the one in Kurschner '676). Thus, Applicant respectfully submits that unexpected results have been shown for the present invention, and that such

unexpected results rebuts the asserted *prima facie* case of obviousness based on the combination of Kurschner '676 and Nishimoto '964.

Accordingly, Applicant respectfully requests the Examiner to reconsider, and to withdraw all rejections and allow the currently pending claims.

A full and complete response has been made to all issues as cited in the Office Action. Thus, Applicant respectfully requests that the Examiner pass the application to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Eugene T. Perez (Reg. No. 48,501) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

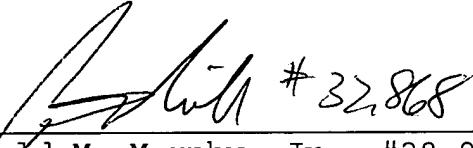
Pursuant to 37 C.F.R. § 1.17 and 1.136(a), Applicant respectfully petitions a one (1) month extension of time for filing a response in connection with the present application. The required fee of \$55.00 (small entity) is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees

required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachments:

Version with Markings to Show Changes Made
Corrected Formal Drawings

(Rev. 02/20/02)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The paragraph beginning on page 1, line 8, has been amended as follows:

There are periodic reports [on generation] of food poisoning associated with poultry meat in many [of] countries every year. The main [causation thereof is] cause of food poisoning is microorganism pollution, namely the pollution caused by pathogenic bacteria such as *Salmonella* spp., *Staphylococcus aureus*, *Clostridium perfringens*, *Campylobacter* spp., *Bacillus Cerius*, *Shigella* spp. and the like.

IN THE CLAIMS:

Claims 1-10 have been canceled.

Claims 11-23 have been added.